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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,171	02/24/2004	Chang-Young Kim	46181	8278

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EXAMINER	
ADDY, ANTHONY S	

ART UNIT	PAPER NUMBER
2617	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/784,171	KIM ET AL.	
	Examiner	Art Unit	
	Anthony S. Addy	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 3-10 and 12-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1 and 3-10* is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/01/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's amendment filed on August 07, 2006. **Claims** 1, 3-10 and 12-16 are pending in the present application.

Response to Arguments

2. Applicant's arguments with respect to **claims** 1, 3-10 and 12-16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yamashita, U.S. Patent Number 6,256,500 (hereinafter Yamashita)** and further in view of **Yamaguchi et al., U.S. Publication Number 2001/0017851 A1 (hereinafter Yamaguchi)** and further in view of **Hsu et al., U.S. Publication Number 2003/0054807 (hereinafter Hsu).**

Regarding claims 12 and 13, Yamashita teaches a method for providing a service using a field intensity of available channels in a hierarchical cell structure in a mobile communication system in which a given area is divided into at least one macrocell and at least one microcell overlapping with each other and a mobile station receives the service from the macrocell or the microcell (see col. 3, lines 6-16, col. 4, line 66 through col. 5, line 12 and Fig. 1), the method comprising the steps of:

requesting a service that the microcell provides while receiving a call in service in the macrocell; handing over the call in service in the macrocell to the microcell; and simultaneously servicing the service and the call in service in the microcell (see col. 6, lines 35-67 and col. 7, line 50 through col. 8, line 18).

Yamashita fails to explicitly teach a carrier-to-interference ratio (C/I), but instead teaches a field intensity of available channels.

However, using a quality indicator such as a measured carrier-to-interference ratio (C/I) and to determine if the measured C/I satisfies the required C/I to provide a service is very well known in the art, since in existing mobile systems a mobile station accesses the best (e.g. higher carrier-to-interference ratio or carrier-to-adjacent ratio) available cell in the radio network, in order to select an optimum available channel in the radio network. In an analogous field of endeavor, Yamaguchi teaches a method of adaptively assigning a packet rate to a mobile station based on measuring a signal quality of a received signal from a base station, wherein a receive signal quality at a mobile station is defined by an interference level at the mobile station (see p. 1 [0010-0011] and p. 3 [0048-0050]).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of using a quality indicator such as a measured carrier-to-interference ratio (C/I) to adaptively assign a packet rate to a mobile station of Yamaguchi, to the method of Yamashita, in order to decrease undesirable interference to adjacent cells of adjacent base stations and to maintain a

high signal quality of a received signal from a base station in communication with the mobile station as per the teachings of Yamaguchi (see abstract).

The combination of Yamaguchi in view of Yamashita fails to explicitly teach providing a multicast service. However the provision of a multicast service to a mobile station is very well known in the art as taught for example by Hsu. Hsu teaches a method of facilitating a multicast and broadcast communication service to mobile stations, wherein the mobile station request and tunes to receive data forming the multicast and broadcast communication service (see abstract).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamaguchi and Yamashita with Hsu to include providing multicast and broadcasting services through the use of flexibly and dynamically defined channels as taught by Hsu (see p. 8 [0096]).

Regarding claims 14 and 15, Yamashita teaches a method for providing a service using a field intensity of available channels in a hierarchical cell structure in a mobile communication system in which a given area is divided into at least one macrocell and at least one microcell overlapping with each other and a mobile station receives a service from the macrocell or the microcell (see col. 3, lines 6-16, col. 4, line 66 through col. 5, line 12 and Fig. 1), the method comprising the steps of: requesting a service that the macrocell provides while receiving a call in service in the microcell; handing over a call in service in the microcell to the macrocell; and simultaneously servicing the service and the call in service in the macrocell (see col. 6, lines 35-67 and col. 7, line 50 through col. 8, line 18).

Yamashita fails to explicitly teach a carrier-to-interference ratio (C/I), but instead teaches a field intensity of available channels.

However, using a quality indicator such as a measured carrier-to-interference ratio (C/I) and to determine if the measured C/I satisfies the required C/I to provide a service is very well known in the art, since in existing mobile systems a mobile station accesses the best (e.g. higher carrier-to-interference ratio or carrier-to-adjacent ratio) available cell in the radio network, in order to select an optimum available channel in the radio network. In an analogous field of endeavor, Yamaguchi teaches a method of adaptively assigning a packet rate to a mobile station based on measuring a signal quality of a received signal from a base station, wherein a receive signal quality at a mobile station is defined by an interference level at the mobile station (see p. 1 [0010-0011] and p. 3 [0048-0050]).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of using a quality indicator such as a measured carrier-to-interference ratio (C/I) to adaptively assign a packet rate to a mobile station of Yamaguchi, to the method of Yamashita, in order to decrease undesirable interference to adjacent cells of adjacent base stations and to maintain a high signal quality of a received signal from a base station in communication with the mobile station as per the teachings of Yamaguchi (see abstract).

The combination of Yamaguchi in view of Yamashita fails to explicitly teach providing a multicast service. However the provision of a multicast service to a mobile station is very well known in the art as taught for example by Hsu. Hsu teaches a

method of facilitating a multicast and broadcast communication service to mobile stations, wherein the mobile station request and tunes to receive data forming the multicast and broadcast communication service (see abstract).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamaguchi and Yamashita with Hsu to include providing multicast and broadcasting services through the use of flexibly and dynamically defined channels as taught by Hsu (see p. 8 [0096]).

Regarding claim 16, Yamashita teaches a method for providing a service using a field intensity of available channels in a hierarchical cell structure in a mobile communication system in which a given area is divided into at least one macrocell and at least one microcell overlapping with each other and a mobile station receives the service from the macrocell or the microcell (see col. 3, lines 6-16, col. 4, line 66 through col. 5, line 12 and Fig. 1), the method comprising the steps of: requesting a service that the microcell provides while receiving a call in service in the microcell; determining that the service requires a higher date rate than the microcell usually provides; and simultaneously servicing the service and the call in service in the microcell (see col. 6, lines 23-67 and col. 7, line 50 through col. 8, line 18).

Yamashita fails to explicitly teach a carrier-to-interference ratio (C/I), but instead teaches a field intensity of available channels.

However, using a quality indicator such as a measured carrier-to-interference ratio (C/I) and to determine if the measured C/I satisfies the required C/I to provide a service is very well known in the art, since in existing mobile systems a mobile station

accesses the best (e.g. higher carrier-to-interference ratio or carrier-to-adjacent ratio) available cell in the radio network, in order to select an optimum available channel in the radio network. In an analogous field of endeavor, Yamaguchi teaches a method of adaptively assigning a packet rate to a mobile station based on measuring a signal quality of a received signal from a base station, wherein a receive signal quality at a mobile station is defined by an interference level at the mobile station (see p. 1 [0010-0011] and p. 3 [0048-0050]).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of using a quality indicator such as a measured carrier-to-interference ratio (C/I) to adaptively assign a packet rate to a mobile station of Yamaguchi, to the method of Yamashita, in order to decrease undesirable interference to adjacent cells of adjacent base stations and to maintain a high signal quality of a received signal from a base station in communication with the mobile station as per the teachings of Yamaguchi (see abstract).

The combination of Yamaguchi in view of Yamashita fails to explicitly teach providing a multicast service. However the provision of a multicast service to a mobile station is very well known in the art as taught for example by Hsu. Hsu teaches a method of facilitating a multicast and broadcast communication service to mobile stations, wherein the mobile station request and tunes to receive data forming the multicast and broadcast communication service (see abstract).

It would therefore have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamaguchi and Yamashita with Hsu to include providing

multicast and broadcasting services through the use of flexibly and dynamically defined channels as taught by Hsu (see p. 8 [0096]).

Allowable Subject Matter

5. Claims 1 and 3-10 are allowed.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony S. Addy whose telephone number is 571-272-7795. The examiner can normally be reached on Mon-Thur 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc M. Nguyen can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A.S.A

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